

AUSTRALIAN PATENT OFFICE

WRITTEN OPINION

		Date of mailing <i>day/month/year</i> 11 FEB 2003	
Applicant's or agent's file reference 6189AU1(519885SG)		REPLY DUE within FIVE MONTHS of the date of the Registrar's letter enclosing the written opinion	
Application No. SG 200005086-4	Application Filing Date (<i>day/month/year</i>) 7 September 2000	Priority Date (<i>day/month/year</i>) 10 September 1999	
International Patent Classification (IPC) (as indicated in the search report) Int. Cl. ⁷ H01L 21/68, B23Q 15/24			
Applicant NEC CORPORATION			

1. This First written opinion consists of a total of 8 sheets.	
2. This opinion contains indications relating to the following items:	
I	<input checked="" type="checkbox"/> Basis of the opinion
II	<input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
III	<input type="checkbox"/> Lack of unity of invention
IV	<input checked="" type="checkbox"/> Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
V	<input type="checkbox"/> Certain documents cited
VI	<input type="checkbox"/> Certain defects in the application
VII	<input checked="" type="checkbox"/> Certain observations on the application
3. This opinion is based upon the assumption that the priority claim is valid.	
4. The search report used was issued by the Australian Patent Office , and the date of completion is: 30 January 2003	
5. If no reply is filed, the examination report will be established on the basis of this opinion.	
6. The date by which the examination report will be established is: 10 December 2003	

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I Basis of the opinion

1. This opinion has been drawn on the basis of:

☒ the application as originally filed.

☐ the description, pages , as originally filed,
pages , filed with the request,
pages , received on with the letter of

☐ the claims, pages , as originally filed,
pages , filed with the request,
pages , received on with the letter of

☐ the drawings, sheets/fig. , as originally filed,
sheets/fig. , filed with the request,
sheets/fig. , received on with the letters of

☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. The amendments have resulted in the cancellation of: pages:
sheets of drawings/figures No :

3. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box.

4. Additional observations, if necessary:

IV. Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 4, 6-8, 10-23	YES
	Claims 1-3, 5, 9	NO
Inventive step (IS)	Claims 6-8, 10-16, 19, 20	YES
	Claims 1-5, 9, 17, 18, 21-23	NO
Industrial applicability (IA)	Claims 1-23	YES
	Claims	NO

2. Citations and explanations

NOVELTY (N) claims 1-3, 5, 9

US 5874820 A

The above citation discloses all of the features of each of the claims 1-3, 5, 9 namely:

- | | |
|--|---|
| • A base | Abstract, column 2 lines 22-26, Figures 1-2 |
| • A movable table disposed on said base | Abstract, column 2 lines 22-26, Figures 1-2 |
| • A work member | Abstract, column 2 lines 22-26, Figures 1-2 |
| • linear motors driving in the X direction and the Y direction at the height of the centre of gravity of a movable section composed of said movable table and said work member | column 5 lines 25-49 |
| • linear motors directly connected to said movable table | Abstract, Figures 1-2 |
| • a first guide member fixed to the base | Figure 1 |
| • a middle table guided by said first guide member | Figure 1 |
| • a second guide member fixed to said middle table | Figure 1 |

JP 7115053 A - abstract

Similarly, the above citation discloses all of the features of each of the claims 1-3, 5 and 9.

JP 09262727 A, abstract and drawing

GB 2329518 A, abstract and drawing

The above citations disclose all of the features of each of the claims 1, 5 and 9.

US 5942871 A, column 6 lines 1-3, figure 1C

The above citation discloses all of the features of each of the claims 1 and 9.

DD 267830 A, abstract

DE 3620969 A, abstract

The above citations disclose all of the features of claim 1 i.e. a base, a movable table disposed on said base, a work member and linear motors driving in the X and Y directions at the height of the centre of gravity of a

VII. Certain observations on the application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Expressions 2 and 5 on page 19 are not clear as they use the symbol "M" to describe the mass of the middle stage section 22. [From the description accompanying these equations at page 19 lines 5-6 it appears to me that the symbol "m" should have been used instead.]
2. Expressions 1-6 on pages 19 and 20 are not clear when compared with Figures 8A and 8B. Figures 8A and 8B show two "springs" each with the rigidity value K and two "springs" each with the rigidity value k, however Expressions 1-6 assume the situation with only one K and one k, therefore apparently there is a discrepancy between the equations and the corresponding figures in respect of the definitions of K and k.
3. In addition, Expressions 1-2 and 4-5 are not clear when compared with the corresponding Figures 8A and 8B because Expressions 1-2 seem to correspond to Figure 8B and Expressions 4-5 to Figure 8A, and not the other way around as suggested in the description. In Figure 8A, F is acting on M, but this is not consistent with Expression 1. Perhaps the order of Figures 8A and 8B [or the order of the corresponding equations] should be reversed?
4. The description on page 19 line 7 is not clear when compared with the corresponding Figures 8A and 8B (and with Expressions 1-2 and 4-5), namely the symbol K is described as "*the rigidity value of the Y-axis guides provided on the middle stage section 22*", however Figures 8A and 8B seem to depict a rigidity value of the X-axis guides (and also Expressions 1-2 and 4-5 refer to the X-coordinate only).
5. Claim 1 is not fully supported by the description because it is silent in relation to the feature that appears to be essential for the invention and that is present in all the embodiments described in the specification, namely the requirement that the movable element can move without a constraint in a direction perpendicular to the driving direction.
6. Claim 3 lacks clarity as the words "*which is*" seem to be missing after the words "*a first guide member*".
7. Claim 5 is not clear in respect to the geometrical orientation of "*a movable range*" and "*the side of said movable section*". The movable section can move both in the driving direction and in the direction perpendicular to the driving direction. It is not clear which "*side of the movable section*" is referred to in Claim 5 and whether "*a movable range*" refers to the driving direction or to the direction perpendicular to the driving direction.]
8. Claims 13 and 14 are not clear in relation to the phrase "*the centre of gravity*". It is not clear whether this phrase refers to the movable table only, or to the movable section or, for instance, to the device in its totality, including the base.



The claimed invention is patentable according to Section 13(2); or



The claimed invention is unpatentable according to Section 13(2) because:

Supplemental Box

(To be used when the space in any of Boxes I to VII is not sufficient)

Continuation of Box No. IV

movable section composed of said movable table and said work member.

The features of the remaining claims (4, 6-8, 10-23) are not found in any single application or patent published before the earliest priority date of the claims.

INVENTIVE STEP (IS) claims 1-5, 9, 17, 18, 21-23

Claims 1-3, 5 and 9: as above.

Claims 4, 17, 18, 21-23: The features added by these claims merely amount to common general knowledge in the art and hence do not involve an inventive step.

Supplemental Box

(To be used when the space in any of Boxes I to VII is not sufficient)

Continuation of Box [No.]: VII

9. Further, Claim 13 is not fully supported by the description in that it uses (twice) a general term "*a position detector*" in place of the "*linear position detector*" as described in the specification (i.e. Claim 13 does not use terminology consistent with the description).